## CLAIMS

1. An optical signal receiver comprising:

an optical-receiving means for receiving an optical signal, the optical signal being intensity-modulated with high frequency electric signals;

a photoelectric-converting means for converting the optical signal received by the optical-receiving means to electric signals; and

a frequency-converting means for converting the electric signals converted by the photoelectric converting means to lower frequencies.

2. The optical signal receiver as claimed in claim 1, wherein the high frequency electric signals are in a microwave frequency band or in a millimeter wave frequency band.

3. The optical signal receiver as claimed in claim 1 or 2, wherein the high frequency electric signals are frequency-division multiplexed electric signals.

4. The optical signal receiver as claimed in claim 1, wherein the high frequency electric signals are RF signals of satellite broadcasting.

5. The optical signal receiver as claimed in claim 4, wherein the electric signals converted by the frequency-converting means are IF signals of the satellite broadcasting.

6. The optical signal receiver as claimed in claim 5, wherein the RF signals are in a frequency range from about 11.7 GHz to 12.8 GHz.

7. The optical signal receiver as claimed in claim 6, wherein the IF signals are in a frequency range from about 1.0 GHz to 2.1 GHz.

8. The optical signal receiver as claimed in any one of claims 1-7, further comprising a transmission means for transmitting via a coaxial cable the electric signals converted to the lower frequencies by the frequency-converting means.

9. An optical signal transmitter comprising a modulation means for intensity-modulating an optical signal with RF signals of satellite broadcasting.

10. The optical signal transmitter as claimed in claim 9, wherein the RF signals are in a frequency range from about 11.7 GHz to 12.8 GHz.